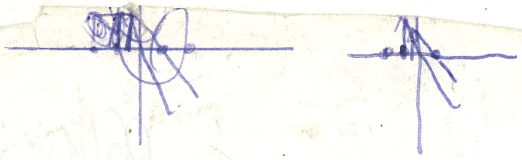
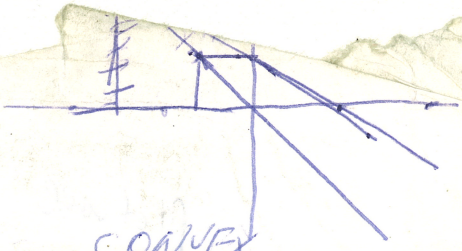
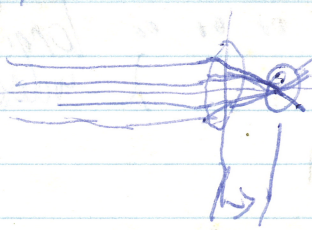




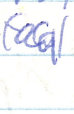
CONVEX

PARABOLIC SHAPE

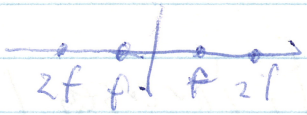


focus

PRINCIPAL AXIS



focal length = f

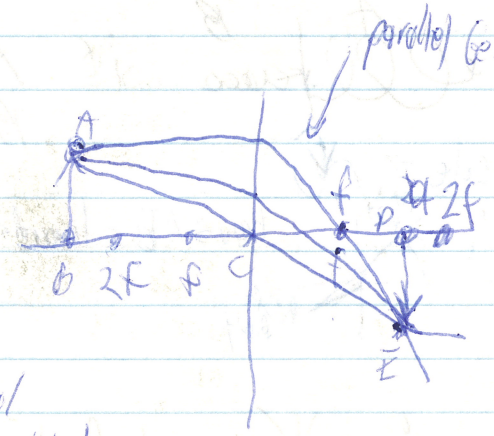


object ▷ image

d_o	d_i	describe	use
∞	f	point	solar burner
$\infty > d_o > 2f$	$2f > d_i > f$	real	camera
2f	2f	real	photocopier
$2f > d_o > f$	$> 2f$	real	projector
f	∞	////////	spotlights
$< f$	same side	virtual	magnifying glass

i = inverted, erect r = real

l = large s = small E = erect v = virtual

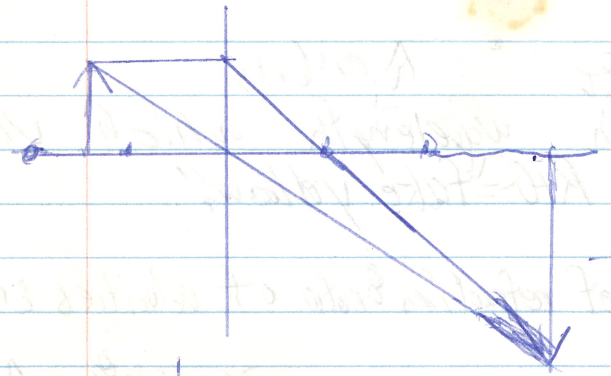


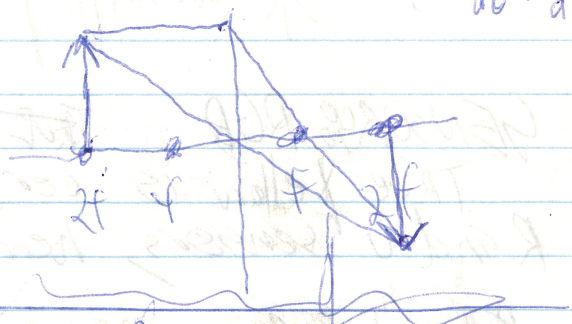
DUH!

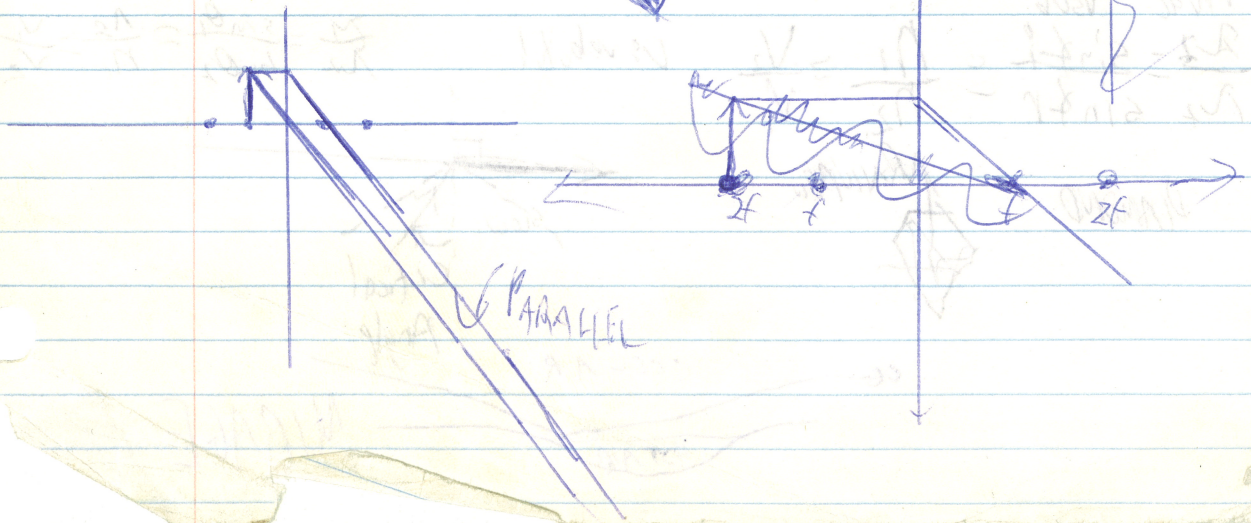
ABC ~ EDC

$\frac{s_o}{s_i} = \frac{d_o}{d_i}$

$\frac{1}{d_o} + \frac{1}{d_i} = \frac{1}{f}$







Oblique = not 90°

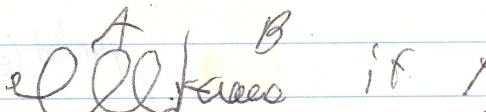
REVIEW Pulse disturbance pt of wave ... longitudinal (parallel) "," transverse (⊥ angles)

λ = wavelength

$v = f\lambda$

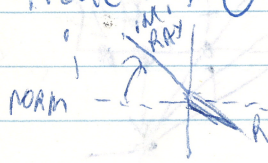
rigid & speed ↑

when pulse hits rigid object, inverses 180°



if A>B norm reflection + transmit
B>A inv. reflect + transmis'

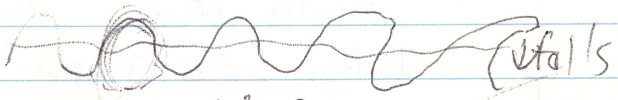
REFRACTION REV



here → lite = towards normal; v. ce versa

LIGHT

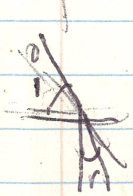
polarizing fe ✳ thru slit ||= |



SENSORS RGB TRUE YEL ↑ distorts

True yellow is certain wavelength which vibrates R and G sensors, hence RG = 'fake yellow'

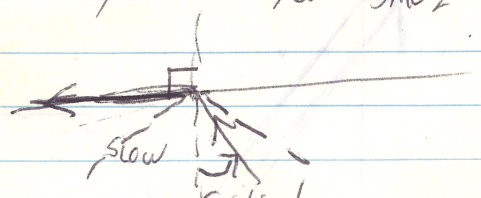
$\frac{n_{sub}}{n_{vac}} = \frac{c}{v_{sub}}$ n° index of refraction, ratio of velocities & reciprocal

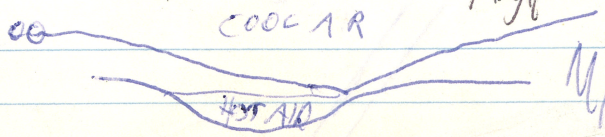


$\frac{\lambda_1}{\lambda_2} = \frac{\sin\theta_i}{\sin\theta_r} = \frac{n_1}{n_2} = \frac{v_2}{v_1}$ v: velocity!

$\frac{v_1}{\lambda_2} = \frac{\sin\theta_1}{\sin\theta_2} = \frac{n_2}{n_1} = \frac{v_1}{v_2}$

DIAMOND





MIRAGE